

THE UNIVERSITY OF CHICAGO

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stop member for inhibiting the frame structure from being bent towards the other of the runs of the transport belt.

7. The conveyor apparatus as claimed in Claim 6, wherein the other of the runs of the transport belt is a transport surface for the articles to be weighed.

8. The conveyor apparatus as claimed in Claim 6, wherein the rollers are rotatable to allow the other of the runs of the transport belt to be held under tension.

9. The conveyor apparatus as claimed in Claim 6, wherein there is further provided a biasing member for biasing at least one of the rollers in a direction required for a distance between the rollers to increase.

10. The conveyor apparatus as claimed in Claim 6, wherein the transport belt is provided with indentations engageable with the rollers to regulate displacement in position in a direction widthwise thereof.

11. The conveyor apparatus as claimed in Claim 6, wherein the frame structure is provided with roofing member for supporting the run of the transport belt from backside thereof and wherein the stop member is defined by the roofing members.

12. A conveyor apparatus of a type wherein when a frame structure is bent, an endless transport belt can be mounted on or removed from at least one pair of rollers supported by the frame structure, said conveyor apparatus comprising a drive source for driving one of the rollers; a pulley mounted on a drive shaft of the drive source; a pulley mounted coaxial with one of the rollers; an endless drive transmitting belt trained between and around the pulleys, wherein a bending fulcrum of the frame structure lies at a location on one side of a line of extension of respective axes of rotation of the pulleys, when the frame structure is not bent, adjacent one of runs of the drive transmitting belt; and a stop member for inhibiting the frame structure from being bent towards the other of the runs of the drive transmitting belt.

13. An article inspecting machine equipped with a conveyor apparatus as defined in Claim 6 for transporting articles to be inspected successively.
14. An article inspecting machine equipped with a conveyor apparatus as defined in Claim 7 for transporting articles to be inspected successively.
15. The article inspecting machine as claimed in Claim 13, wherein there is provided an engagement for supporting a conveyor apparatus when engaged with the conveyor apparatus, and wherein the conveyor apparatus and the engagement are engaged with each other when a frame structure of the conveyor apparatus is not bent, but are disengaged from each other when the frame structure of the conveyor apparatus is bent.
16. A weighing conveyor for weighing a weight of an article to be weighed while the article to be weighed is transported, said weighing conveyor comprising a conveyor apparatus for transporting the article to be weighed and having a transport surface laid horizontally; a drive source for driving the conveyor apparatus, and a load detector for supporting the conveyor apparatus and the drive source and for detecting the weight of the article to be weighed that is supported and transported by the conveyor apparatus, in terms of up and down displacement thereof, an axis of rotation of the drive source being arranged parallel to a direction of such displacement.
17. The weighing conveyor as claimed in Claim 16, wherein the drive source is arranged on a free end of the load detector.
18. The weighing conveyor as claimed in Claim 16, further comprising a drive transmission mechanism for transmitting a driving force of the drive source to the conveyor apparatus, wherein an axis of a rotatory drive force generated by the drive source is converted into a direction parallel to the transport surface by the drive transmission mechanism.
19. A weighing apparatus equipped with a weighing conveyor as defined in Claim 16.

20. A weighing conveyor for weighing a weight of an article to be weighed while the article to be weighed is transported, said weighing conveyor comprising a conveyor apparatus for transporting the article to be weighed; a drive source for driving the conveyor apparatus; a drive transmitting mechanism for transmitting a drive force of the drive source to the conveyor apparatus; and a load detector for supporting the conveyor apparatus, the drive source and the drive transmitting mechanism and for detecting the weight of the article to be weighed that is supported and transported by the conveyor apparatus, wherein the conveyor apparatus is disposed above the load detector, the drive source is disposed at a location substantially level with the load detector, or below the load detector, with respect to an up and down direction, and the drive transmission mechanism is disposed so as to extend between a position below the load detector and a position above the load detector with the load detector intervening therebetween, such that a composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to a position in a vicinity of a center of moment of the load detector in the up and down direction.

21. A weighing conveyor for weighing a weight of an article to be weighed while the article to be weighed is transported, said weighing conveyor comprising a conveyor apparatus for transporting the article to be weighed; a drive source for driving the conveyor apparatus; a drive transmitting mechanism for transmitting a drive force of the drive source to the conveyor apparatus; and a load detector for supporting the conveyor apparatus, the drive source and the drive transmitting mechanism and for detecting the weight of the article to be weighed that is supported and transported by the conveyor apparatus, wherein the conveyor apparatus is disposed below the load detector, the drive source is disposed at a location substantially level with the load detector with respect to an up and down direction, and the drive transmission mechanism is disposed so as to extend between a position below the load detector and a position above the

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load detector with the load detector intervening therebetween, such that a composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to a position in a vicinity of a center of moment of the load detector in the up and down direction.

22. A weighing conveyor for weighing a weight of an article to be weighed while the article to be weighed is transported, said weighing conveyor comprising a conveyor apparatus for transporting the article to be weighed; a drive source for driving the conveyor apparatus; a drive transmitting mechanism for transmitting a drive force of the drive source to the conveyor apparatus; and a load detector for supporting the conveyor apparatus, the drive source and the drive transmitting mechanism and for detecting the weight of the article to be weighed that is supported and transported by the conveyor apparatus, wherein the load detector is arranged at a location substantially intermediate of the conveyor apparatus with respect to a direction of transport of the article to be weighed, the drive source is arranged adjacent the load detector and the drive transmission mechanism is arranged so as to extend between a position downstream of the direction of transport and a position upstream of the direction of transport with the load detector intervening therebetween, such that a composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to a position in a vicinity of a center of moment of the load detector in the transport direction.

23. A weighing conveyor for weighing a weight of an article to be weighed while the article to be weighed is transported, said weighing conveyor comprising a conveyor apparatus for transporting the article to be weighed; a drive source for driving the conveyor apparatus; a drive transmitting mechanism for transmitting a drive force of the drive source to the conveyor apparatus; and a load detector for supporting the conveyor apparatus, the drive source and the drive transmitting mechanism and for detecting the weight of the article to be weighed that is supported and transported by the conveyor apparatus, wherein the

load detector is arranged substantially intermediate of the conveyor apparatus with respect to a transport widthwise direction of the article to be weighed, the drive source is arranged at a location substantially level with the load detector with respect to the transport widthwise direction, and the drive transmission mechanism is arranged so as to extend between a position substantially level with the load detector and a position leftwards or rightwards of the transport widthwise direction, or so as to extend between respective positions leftwards and rightwards of the transport widthwise direction with the load detector intervening therebetween, such that a composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to a position in a vicinity of a center of moment of the load detector in the transport widthwise direction.

24. The weighing conveyor as claimed in Claim 20, wherein the load detector is arranged substantially intermediate of the conveyor apparatus with respect to the direction of transport of the article to be weighed, the drive source is positioned adjacent the load detector, and the drive transmission mechanism is arranged so as to extend between respective positions upstream and downstream of the direction of transport with the load detector intervening therebetween, such that the composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to the position in the vicinity of the center of moment of the load detector also in the direction of transport.

25. The weighing conveyor as claimed in Claim 20, wherein the load detector is arranged substantially intermediate of the conveyor apparatus with respect to the transport widthwise direction, the drive source is positioned at a location substantially level with the load detector with respect to the transport widthwise direction, and the drive transmission mechanism is arranged so as to extend between a location substantially level with the load detector with respect to the transport widthwise direction and a location leftward or rightward of the transport widthwise direction, or so as to extend between respective locations

leftwards and rightwards of the transport widthwise direction with the load detector intervening therebetween, such that the composite center of gravity of the conveyor apparatus, the drive source and the drive transmission mechanism is brought to the position in the vicinity of the center of moment of the load detector also in the transport widthwise direction.

26. A weighing apparatus equipped with a weighing conveyor as defined in Claim 20.

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